

***NASA Ames Workshop on
Sustainable Urban Development - 1/9/09***



**Using remote sensing to coordinate federal
mission agency studies of urban systems**

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Why have an urban research agenda?



- More than half of the world's population lives in cities
- Global climate change driven increasingly by cities
- Cities consume most energy, food, water, materials
- Massive global need for new urban infrastructure
- Major urban impact on remaining undeveloped lands
- Terrorism's causes and effects are mostly in cities

Urban systems research is a federal orphan:



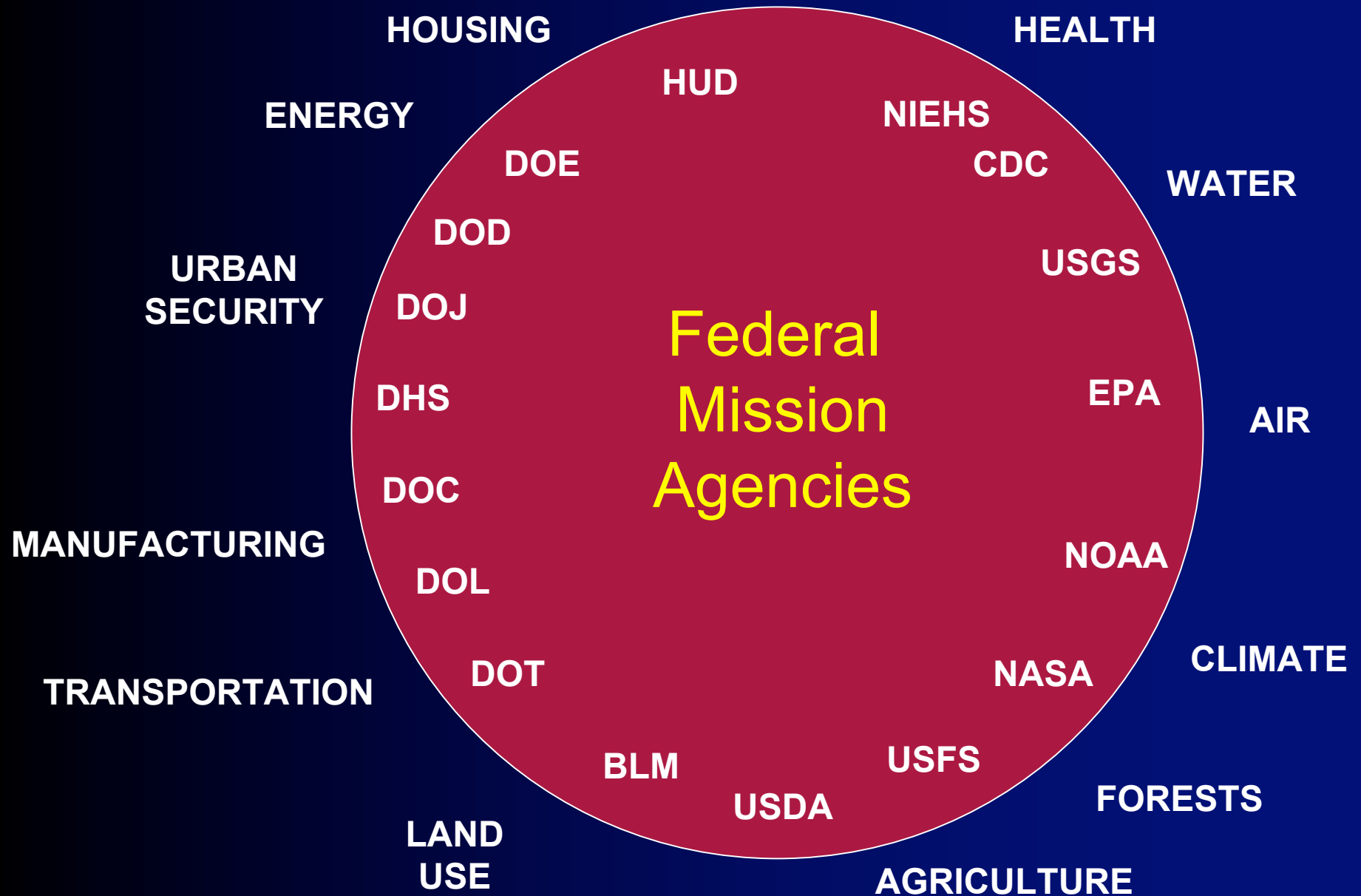
- National research priorities are largely set by federal funding patterns
- No federal agencies “own” the full urban agenda
- No “urban systems lobby” for federal funding
- Federal urban research and policy is fragmented

The Opportunity:

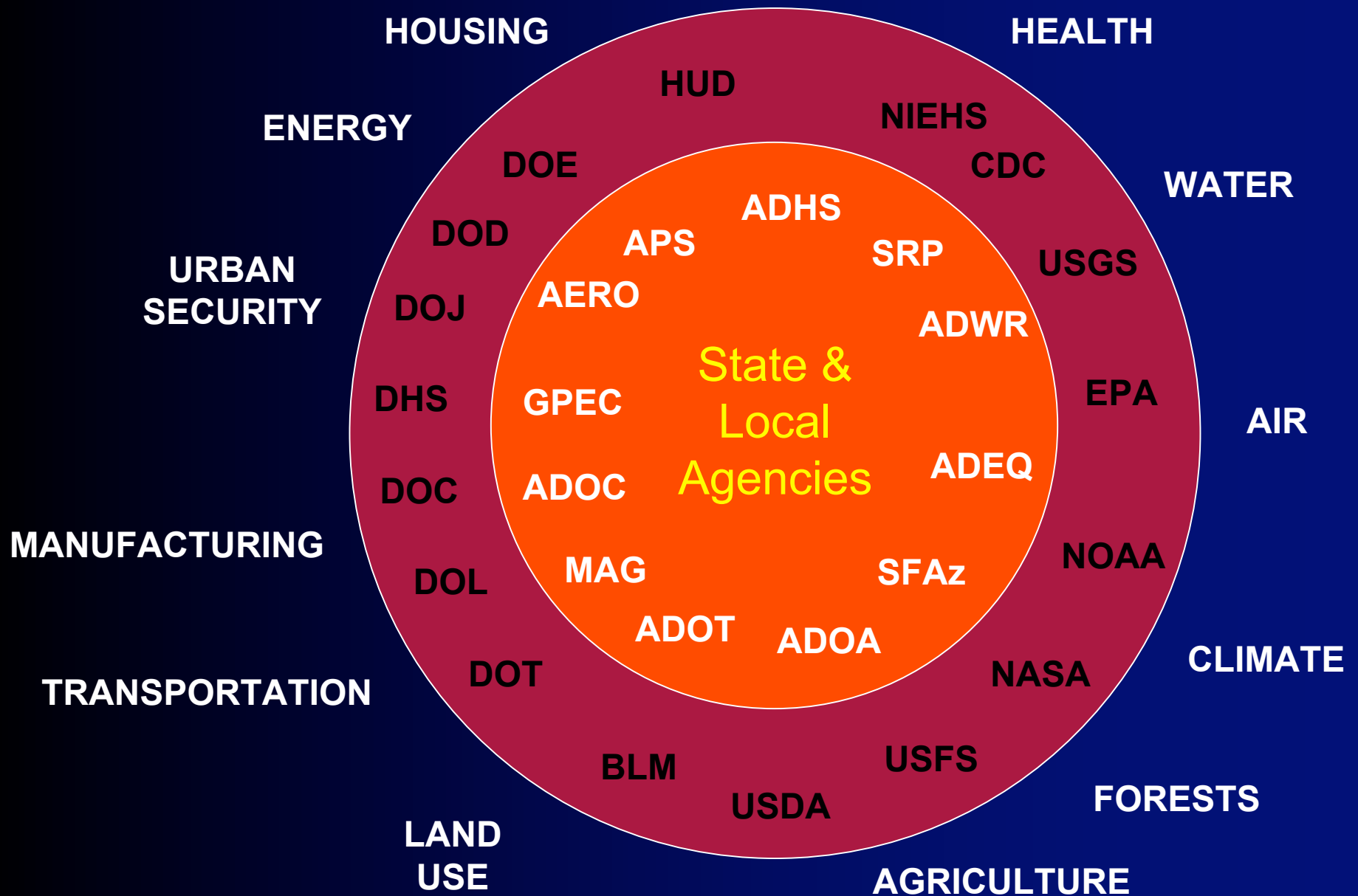


- Urban sustainability affects most of US population
- Nearly all Federal agency missions include urban components that could be better coordinated
- State and local studies could also be linked
- Cities around the world can learn from each other
- Can NASA help integrate global urban research?

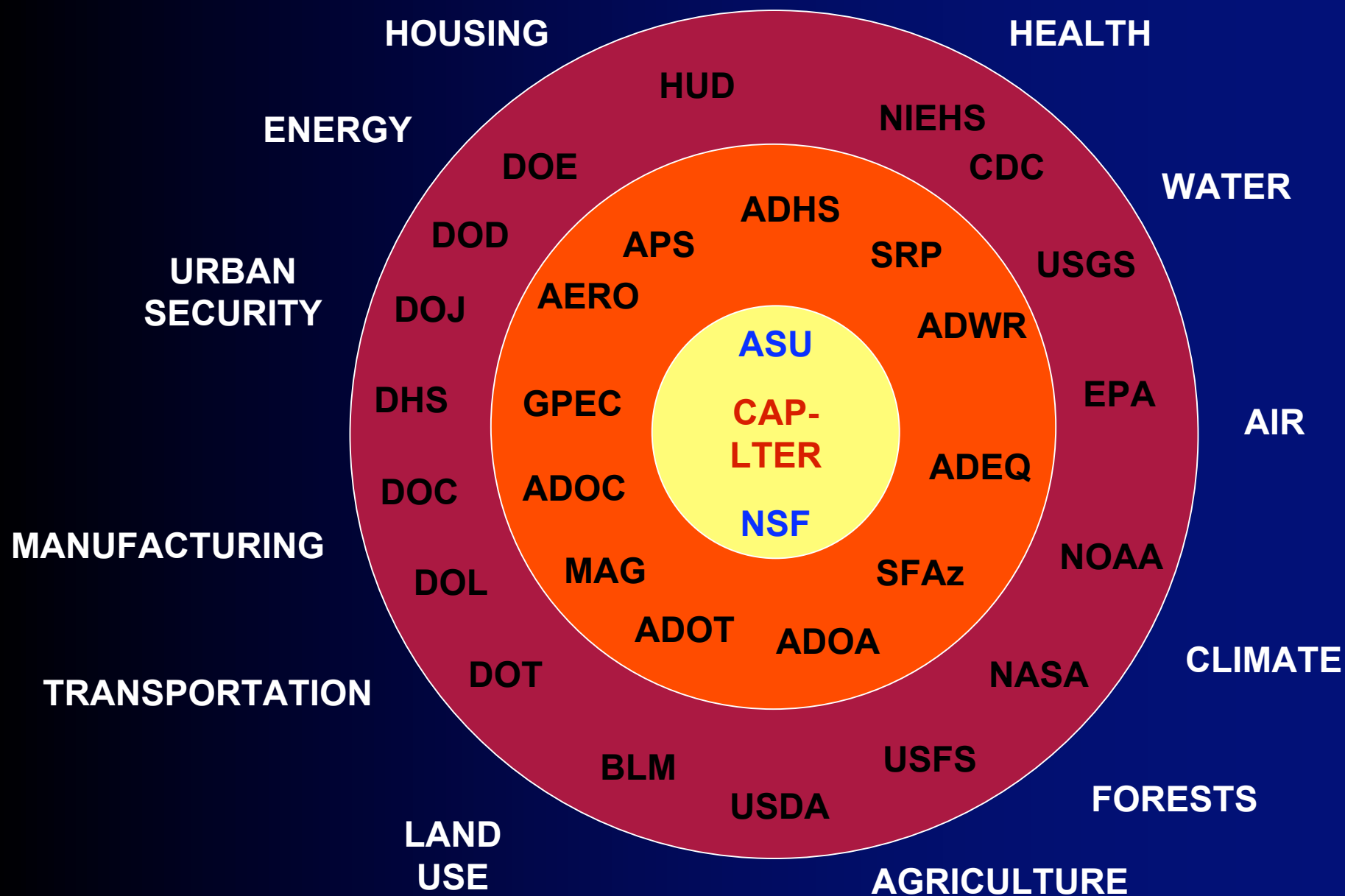
Each Federal agency has a narrow urban focus



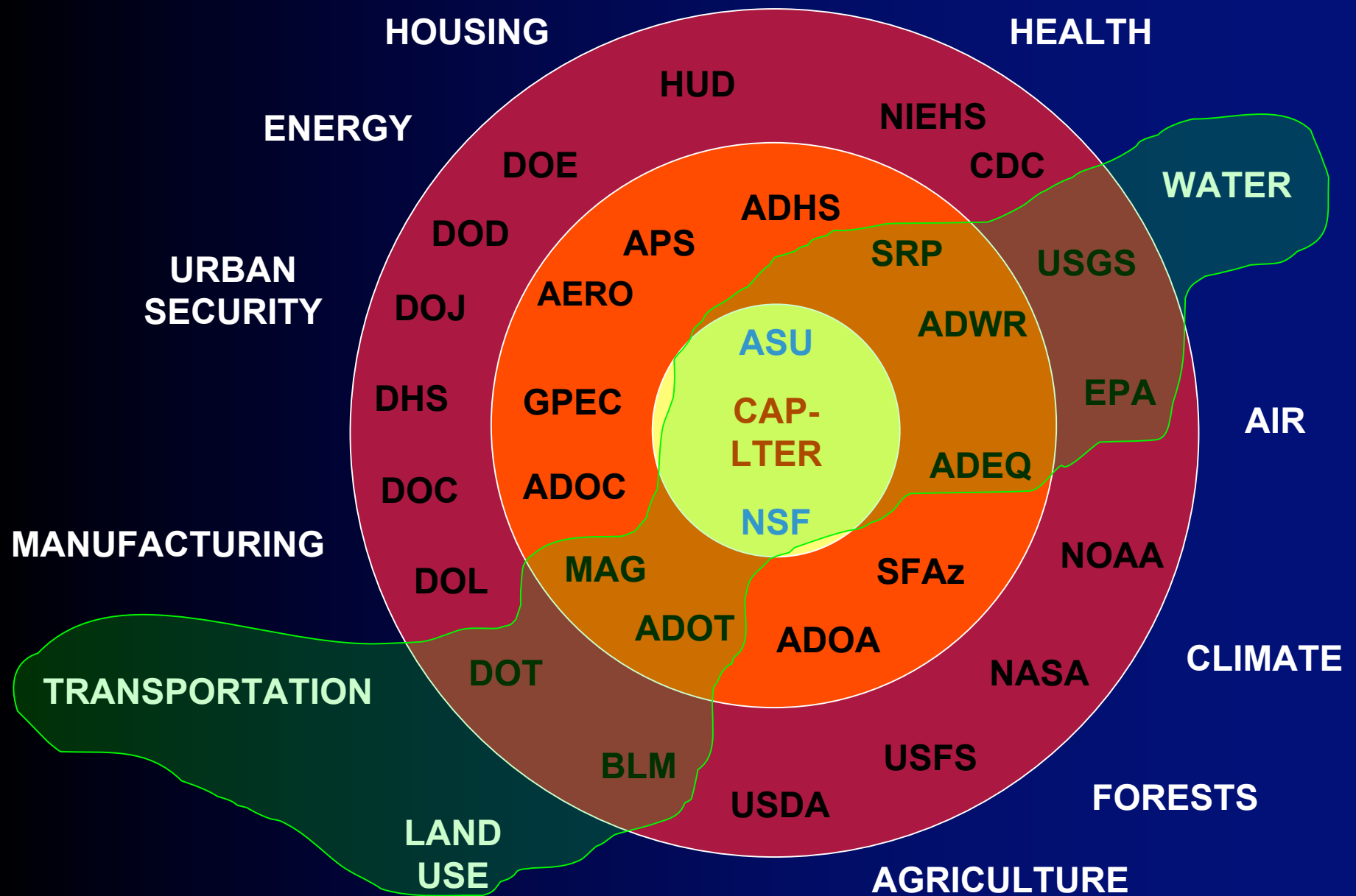
State and local agencies are also Balkanized



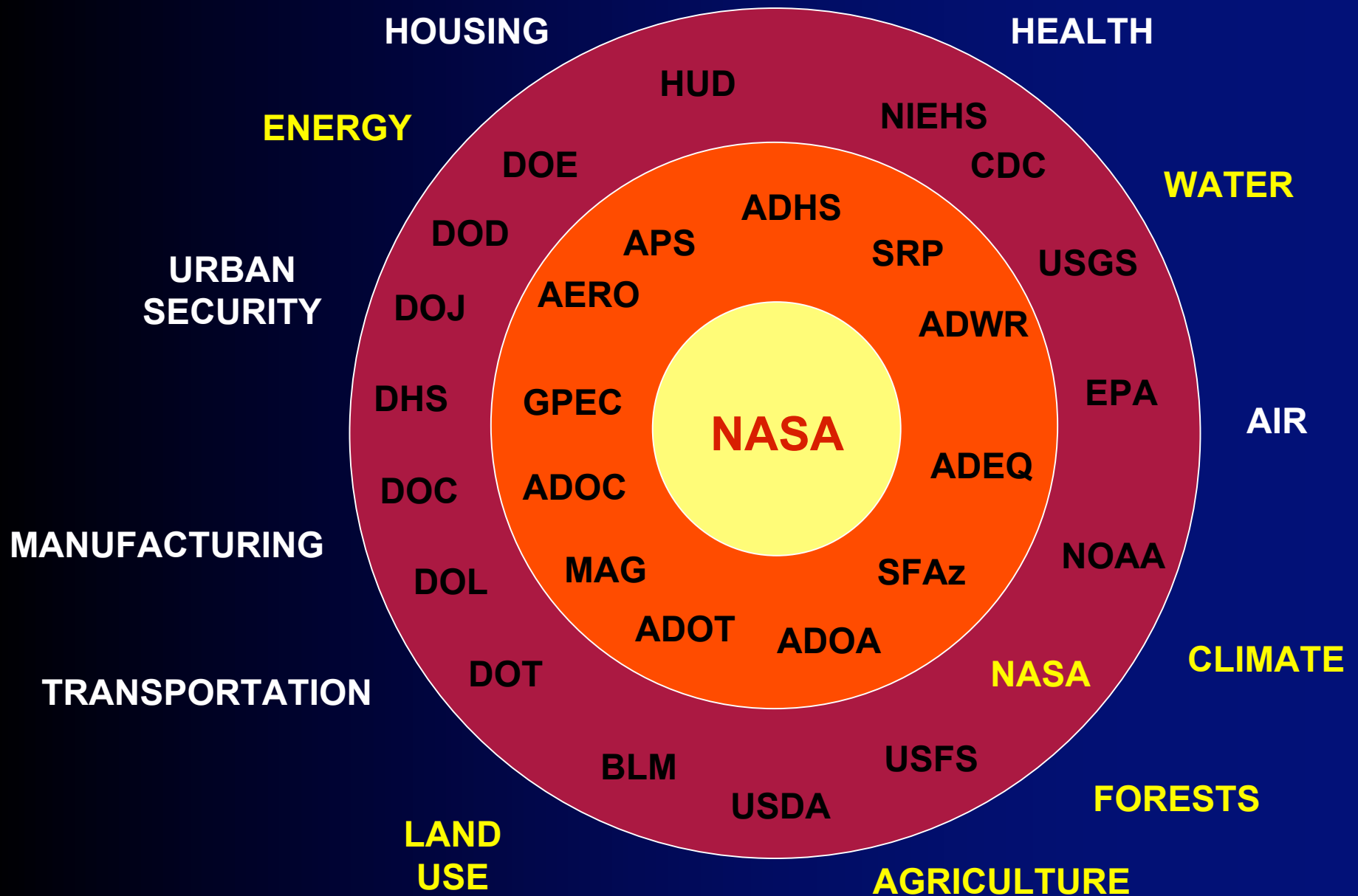
NSF programs like CAP-LTER foster integration



Do urban transport and land use affect water?



NASA relevant to most urban components



NASA's potential role:



- New NASA instruments and missions could measure, monitor, and analyze urban systems
- Remote sensing can integrate urban information
- NASA has extensive HPC experience
- NASA has broad national presence
- NASA respected by similar agencies world-wide
- NASA can coordinate with cities and regions

The Need:



- High level (NRC, OSTP) proposals to add urban focus to existing programs and centers
- Roadmap to craft a broad, coordinated Federal urban research and policy agenda
- New Centers to explore integrative possibilities
- Workshops like this one